

Increasing the Number of Frontline Improvements Completed in Breast Imaging and Intervention's Improvement System by Using Lean Principles

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DMAIC

Define

The Breast Imaging and Intervention's (BII) frontline daily improvement system was not being fully utilized and staff identified issues, known as PCSIs, were not addressed in a timely manner. The goal of this project was to increase the number of BII's PCSIs resulting in improvement from an average of 1.3 to 3 per month by May 31st, 2016.

Measure

Baseline measurements were gathered by counting the number of PCSIs that resulted in improvement which averaged 1.3 per month (4 total projects from December 2015 to February 2016). See Figure 1.

Analyze

Utilizing an A3 Problem Solving Form, the BII team identified the root causes of the problem to be:

- Staff struggled bringing forth issues and defining a problem statement
- No structured system to progress an active PCSI forms
- Poor communication of active PCSIs

Improve

Based on the root causes, the team used Plan-Do-Study-Act (PDSA) cycles to test several changes. The main changes implemented were:

- Implemented a structured coaching strategy to define a clear problem statement (Figures 2 & 3)
 - Identified select staff as coaches
- Creation of a uniform PCSI intake process
- Standard and visual PCSI process flow (Fig 4)

By October 2016, after a few revisions to the improvement system, the team is now completing an average of 5 projects per month.

Control

The team continues to track the number of projects completed each month. The results and ongoing progress are communicated to the multidisciplinary team thru daily huddles.

Figure 1

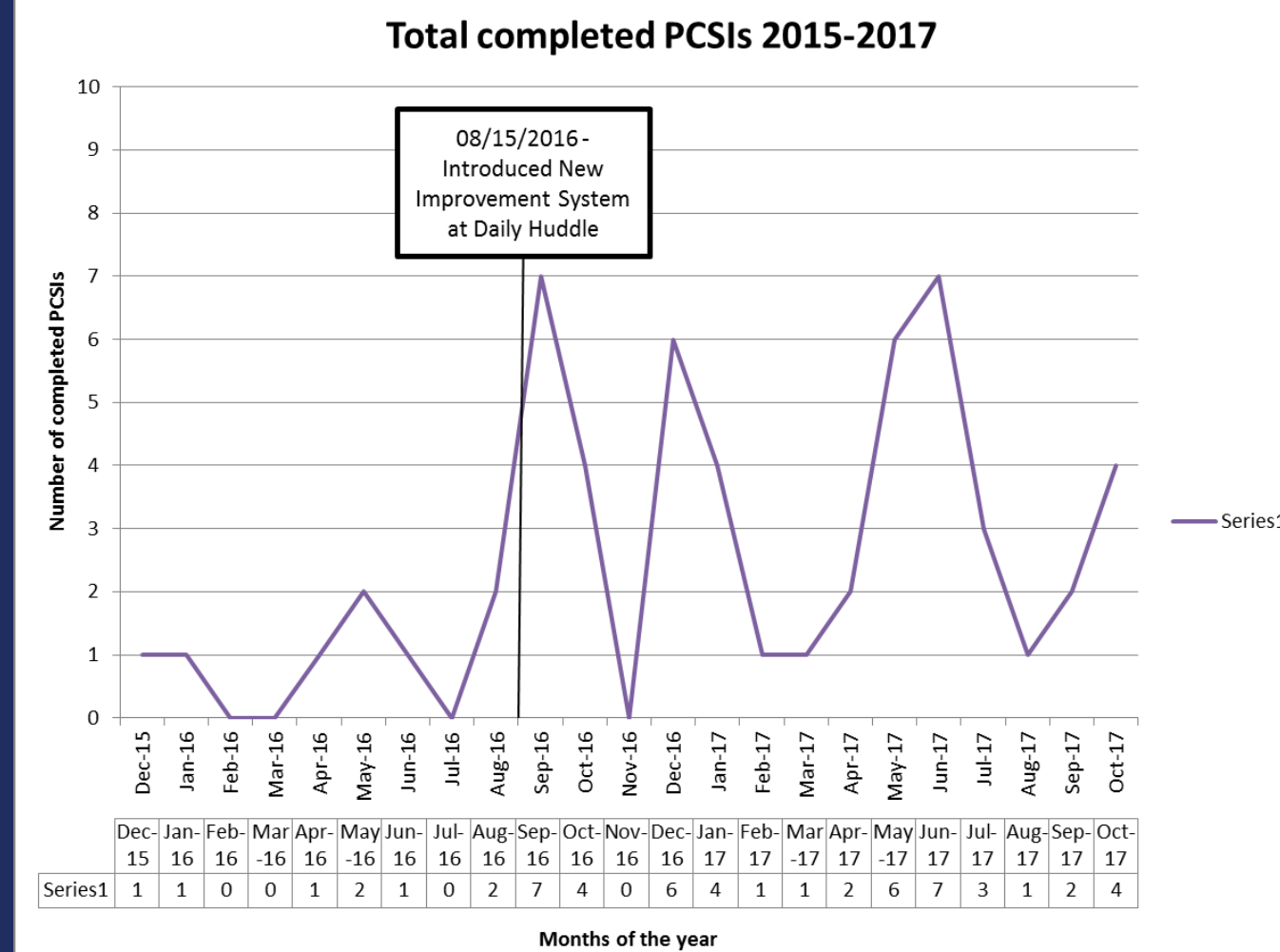


Figure 2

General Radiology Four Actuals Coaching Kata

1. Where is the Actual *Place*?
 - a. Location or work area
2. What is the Actual *Occurrence*?
 - a. Defect, unwanted condition, event or pattern
3. What is the Actual *Condition*?
 - a. Who is involved, how often, when
4. What is the Actual *Should*?
 - a. How would you describe what is happening vs. what should be happening?
 - b. What have you thought of trying?

Figure 3

Original PCSI form:

Problem:

What do you think caused it? (Ask why 5 times...)

Prioritization score:
Does the gap/defect pose a risk of significant adverse outcome or regulatory non-compliance? Yes → Immediate top priority
 No → Proceed with scoring below

Safety: When the gap occurs, it causes acute injury:
 > 75% of the time → 3 points
 50-75% of the time → 2 points
 25-50% of the time → 1 point
 <25% of the time → 0 points

Alignment: Does the gap present a barrier to division goals?
 The gap is a barrier to a major focus for this year → 2
 The gap is a barrier to a 5-year goal → 1
 The gap is unrelated to division goals → 0

Frequency: This gap occurs:
 3-5 times per week → 2 points
 2-3 times per month → 1 point
 < 2 times/month → 0 points

Existing Infrastructure: Do we have an established process for addressing this gap?
 No → 1 point
 Yes → 0 points

Impact: How wide is the impact of the gap?
 Patients are significantly impacted → 5
 Patients are slightly/not impacted, AND
 Multiple stakeholders see significant impact → 4
 A referrer sees a significant impact → 3
 A single stakeholder sees a significant impact → 2
 Small impact on many stakeholders → 1
 Minimal impact → 0

Total Score:

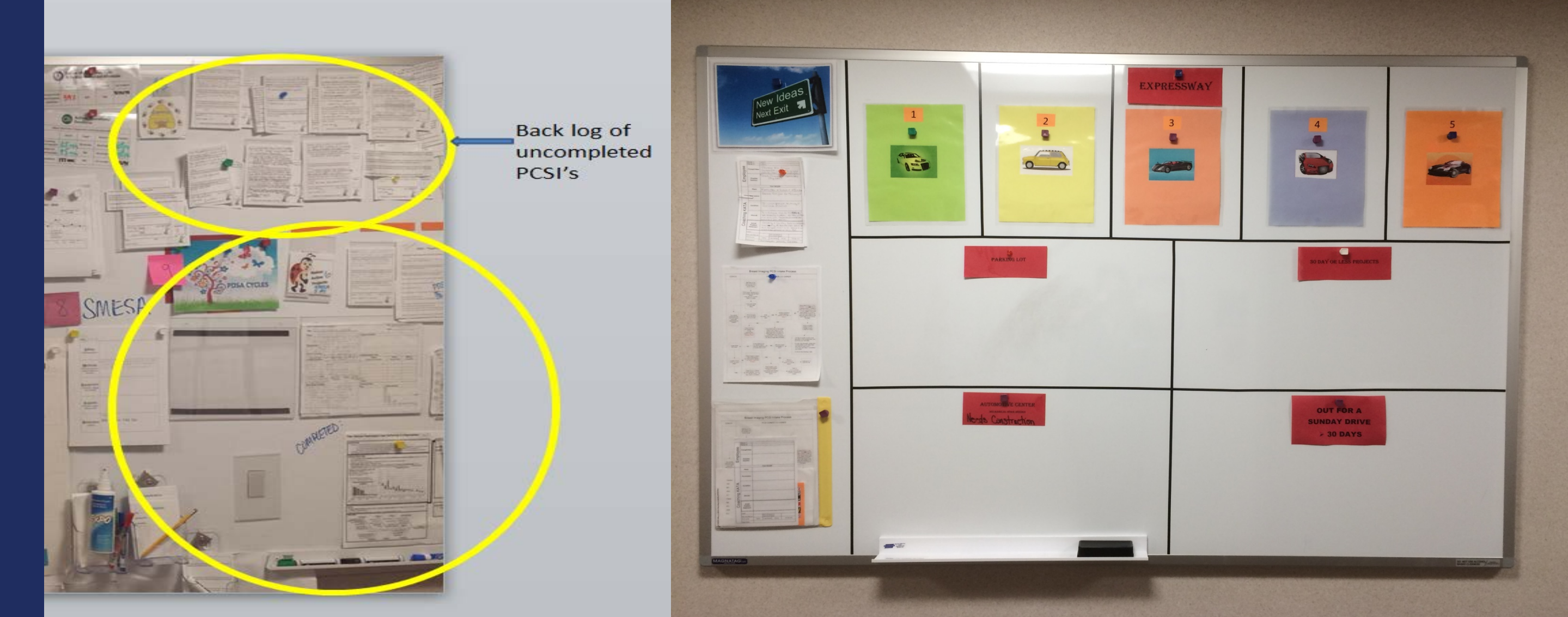
Name: _____ Date: _____

Coach's Initials: _____

New PCSI form:

Employee	Owner 1:	
	Owner 2:	
	Thought/Idea:	
Coaching KATA	Possible Solution:	
	Four Actuals	
	Place:	
	Occurrence:	
	Condition:	
	Should:	
	Actual Problem Statement:	
	Coach:	
	Date card filled out:	Date card placed on Improvement Board:
	Date began 5 day Kanban:	Date completed or moved to <30 day:
	Stakeholders:	

Figure 4



Former State

Current State

Lessons Learned

- The team learned incorporating transparency into the daily improvement system which led to increased communication of project status and increased awareness of change.
- Started with Just Do Its, but learned that each form needed more time. This led to more firefighting than needed.

Opportunities for Growth

- Better compliance needed for the PCSIs entering the Improvement System to follow the swim lane
- The PCSIs need to be completed based on data and follow the direction of the department
 - Track defects
 - Gather data
- Better empower the frontline staff to engage with the Improvement System and to lead their PCSIs
 - Education
 - Training
 - Real-Time Hands-On Learning
- Planning for staff to participate during the work day